What is claimed is:

1. An illumination device for illuminating a display area of an active matrix type liquid crystal display device, comprising:

at least one light source capable of changing light emission brightness;

at least one light-emitting area for emitting light from the light source; and

a light source power supply circuit for switching between a maximum lighting state in which the light source is made to emit light at a specified maximum brightness and an intermediate lighting state in which the light source is made to emit light at a specified intermediate brightness lower than the maximum brightness.

2. An illumination device according to claim 1, wherein the light-emitting area includes a light emission opening to be used when the display area is illuminated and disposed substantially in parallel to an extension direction of a gate bus line formed in the liquid crystal display device.

3. An illumination device according to claim 1, wherein the light source power supply circuit synchronizes with one of gate pulses sequentially outputted to plural gate bus lines formed in the liquid crystal display device and switches between the maximum lighting state and the intermediate lighting state.

4. An illumination device according to claim 1, wherein the intermediate lighting state is set to have a brightness level of 50% or less of a brightness level of the maximum lighting state.

5. An illumination device according to any one of claim 1, wherein an illumination time in the maximum lighting state is a time of 50% or less of one frame period.

6. An illumination device according to claim 1, further comprising:

a first light source unit including a first light guide plate and a first light source disposed at an end thereof, for mainly illuminating a first light-emitting area and supplying part of light to an adjacent second light-emitting area; and

a second light source unit laminated on the first light source unit and including a second light guide plate and a second light source disposed at an end thereof, for mainly illuminating the second light-emitting area and supplying part of light to the adjacent first light-emitting area.

7. An illumination device according to claim 6, wherein the first light guide plate is disposed in the first and the second light-emitting areas, and

the second light guide plate is disposed in only the first light-emitting area.

8. An illumination device according to claim 7, further

comprising:

a third light source unit including a third light guide plate and a third light source disposed at an end thereof, for mainly illuminating a third light-emitting area and supplying part of light to an adjacent fourth light-emitting area; and

a fourth light source unit laminated on the third light source unit and including a fourth light guide plate and a fourth light source disposed at an end thereof, for mainly illuminating the fourth light-emitting area and supplying part of light to the adjacent third light-emitting area.

9. An illumination device according to claim 8, wherein the third light guide plate is disposed in the third and the fourth light-emitting areas, and

the fourth light guide plate is disposed in only the fourth light-emitting area.

10. An illumination device according to claim 9, wherein

the first light guide plate and the fourth light guide plate are disposed on a same plane, and

the second light guide plate and the third light guide plate are disposed on a same plane.

11. An illumination device according to claim 10, further comprising:

a transmission diffused plate disposed above the first to the fourth illumination areas; and

a light mixing area disposed between the transmission diffused plate and the first to the fourth illumination areas.

12. An illumination device according to claim 11, wherein the light mixing area is a space or a transparent member having a thickness of 0.5 mm to 10 mm.

13. An illumination device according to claim 10, wherein a double-sided reflection plate for performing regular reflection or diffuse reflection is disposed between opposite end parts of the second light guide plate and the third light guide plate.

14. An illumination device according to claim 13, wherein a portion between the opposite end parts of the second light guide plate and the third light guide plate is formed into a Λ shape opening to a rear surface side.

15. An illumination device according to claim 14, wherein when refractivity of a light guide substance is n, an apex angle θ of the Λ shape satisfies a relation of

$\theta \leq 180° - 4 \times \sin^{-1}(1/n)$.

16. An illumination device according to claim 1, wherein the light source power supply circuit includes a brightness adjusting volume for adjusting brightness of emission light from the light-emitting area.

17. A liquid crystal display device of an active matrix

type, comprising:

an illumination device according to claim 1.

18. A liquid crystal display device, comprising:

an LCD panel modulating light transmissivities of plural pixels disposed in a matrix form on the basis of respective gradation data;

an illumination device for irradiating light to the respective pixels while a ratio (duty ratio) of a lighting time in one frame period is changed; and

a display data conversion part for calculating respective lightnesses and a lightness histogram from the respective gradation data, determining a threshold lightness from the lightness histogram on the basis of a previously determined ratio of pixels to be saturated in brightness, processing the respective gradation data on the basis of the threshold lightness to output them to the LCD panel, and outputting duty ratio data to change the duty ratio to the illumination device.

19. A liquid crystal display device according to claim 18, wherein the display data conversion part counts the lightnesses from the lightness histogram in descending order of lightness on the basis of the ratio of the pixels to be saturated in brightness and determines the threshold lightness.

20. A liquid crystal display device according to claim 19, wherein the display data conversion part judges M ($M \leq N$)

pixels, in which an image is displayed, of N pixels in one frame, and determines the threshold lightness on the basis of a product of the number of the M pixels and the ratio of the pixels to be saturated in brightness.

21. A liquid crystal display device according to claim 18, wherein the display data conversion part determines the duty ratio so that a product of a maximum value which the gradation data can take and the duty ratio becomes equal to the threshold lightness, processes the gradation data of a pixel of a lightness not lower than the threshold lightness to have the maximum value, and processes the gradation data of the other pixel so that a product of the processed gradation data and the determined duty ratio becomes equal to lightness of the original gradation data of the pixel.

22. An illumination device according to claim 1, wherein the light-emitting area includes a plurality of the light sources, and

the light source control system controls currents fed to the plurality of the light sources, respectively, to switch between the maximum lighting state in which the light-emitting area is made to emit light at the maximum brightness and the intermediate lighting state in which the light-emitting area is made to emit light at the specified intermediate brightness lower than the maximum brightness.

23. An illumination device according to claim 22, wherein the light source control system feeds a current to

at least one of the plurality of the light sources so that the maximum lighting state occurs at a specified period and a non-lighting state occurs at a time other than that, and

feeds a current to the remaining light source so that the non-lighting state occurs at a time of the maximum lighting state and the intermediate lighting state occurs at a time other than that.

24. An illumination device according to claim 22, wherein the light source control system feeds a current to at least one of the plurality of the light sources so that a first intermediate lighting state lower than the maximum lighting state occurs at a specified period, and a second intermediate lighting state lower than the first intermediate lighting state occurs at a time other than that, and

feeds a current to the remaining light source so that a third intermediate lighting state occurs so as to cause the illumination area to have the maximum lighting state at a time of the first intermediate lighting state, and a fourth intermediate lighting state occurs so as to cause the illumination area to have the intermediate lighting state at a time of the second intermediate lighting state.

25. An illumination device according to claim 22, wherein the light source control system feeds a current to at least one of the plurality of the light sources so that the intermediate lighting state always occurs, and

feeds a current to the remaining light source so that the illumination area has the maximum lighting state at a

specified period and has a non-lighting state at a time other than that.

26. An illumination device according to claim 22, wherein the light source control system controls a current so that a non-lighting state occurs between the maximum lighting state and the subsequent intermediate lighting state.

27. An illumination device according to claim 22, wherein the light source control system controls a current so that a lighting state lower than the intermediate lighting state occurs between the maximum lighting state and the subsequent intermediate lighting state.

28. A liquid crystal display device of an active matrix type, comprising:

an illumination device according to claim 22.

29. An illumination device, comprising:

a first and a second linear light sources;

a light guide plate including a first light-emitting area having a first light extraction element for mainly extracting light guided from the first linear light source to the outside, and a second light-emitting area having a second light extraction element for mainly extracting light guided from the second linear light source to the outside; and

a light source driving circuit for turning on the first

and the second linear light sources at a specified blinking frequency, at timings different from each other, and for lighting times almost equal to each other, or for turning on the first and the second linear light sources at a specified blinking frequency for lighting times different from each other.

30. An illumination device according to claim 29, wherein the first and the second light extraction elements include a prism shape formed on a surface of the light guide plate.

31. An illumination device according to claim 29, wherein the first and the second light extraction elements include a light scattering element formed on a surface of the light guide plate.

32. An illumination device according to claim 29, wherein the first and the second light extraction elements include a wedge shape of the light guide plate.

33. An illumination device according to claim 29, wherein the light guide plate includes a plurality of the first light-emitting areas and a plurality of the second light-emitting areas, and

the first and the second light-emitting areas are alternately arranged.

34. An illumination device according to claim 29,

wherein the first linear light source is disposed to be close to the second light-emitting area, and

the second linear light source is disposed to be close to the first light-emitting area.

35. An illumination device according to any one of claim 29, wherein the first linear light source is disposed to be close to the first light-emitting area, and

the second linear light source is disposed to be close to the second light-emitting area.

36. An illumination device according to claim 29, further comprising:

a first light guide area for guiding light from the first linear light source to the first light-emitting area, and a second light guide area for guiding light from the second linear light source to the second light-emitting area,

wherein the first and the second light guide areas are included in the one light guide plate.

37. An illumination device according to claim 29, further comprising:

a first light guide area for guiding light from the first linear light source to the first light-emitting area, and a second light guide area for guiding light from the second linear light source to the second light-emitting area,

wherein the first and the second light guide areas are included in each of a plurality of the light guide plates which are laminated and disposed.

38. A liquid crystal display device comprising:

a liquid crystal display panel including a pair of substrates and a liquid crystal sealed between the pair of substrates;

a driving circuit for supplying a specified driving signal to the liquid crystal display panel; and

an illumination device for illuminating the liquid crystal display panel,

wherein an illumination device according to claim 29 is used as the illumination device.

39. A liquid crystal display device according to claim 38, wherein the blinking frequency is equal to a frame frequency of the liquid crystal display panel.

40. A liquid crystal display device according to claim 38, wherein the first and the second light-emitting areas are arranged in a scanning direction of the display area.

41. A liquid crystal display device according to claim 38, wherein the driving circuit performs a multi-scanning of the liquid crystal display panel.

42. A liquid crystal display device according to claim 18, wherein the lightness is obtained from the gradation data (R, G, B) of the respective pixels as the lightness $Y = r \times R + g \times G + b \times B$ (r, g and b are real numbers and includes a numerical value of 0).

43. A polarizing plate, previously heat shrunk before it is bonded to a surface of a light guide plate of an illumination device or a surface of a liquid crystal panel of a liquid crystal display device.

44. A polarizing plate according to claim 43, wherein protection films are bonded to both surfaces of a polarizing film, and at least the polarizing film is previously heat shrunk.

45. A polarizing plate according to claim 44, further comprising a retardation film.

46. A polarizing plate according to claim 43, wherein a quantity α of the heat shrinkage is $0 < \alpha \leq 0.3\%$.

47. An illumination device comprising a light guide plate to which a polarizing plate is bonded, wherein a polarizing plate according to claim 43 is used as the polarizing plate.

48. An illumination device according to claim 47, wherein when being combined with the liquid crystal panel, the polarizing plate is bonded to a surface of the light guide plate at a side of the liquid crystal panel.

49. A liquid crystal display device comprising a panel surface to which a polarizing plate is bonded, wherein a

polarizing plate according to claim 43 is used as the polarizing plate.

50. A liquid crystal display device of an active matrix type, comprising an illumination device according to claim 47.

51. A liquid crystal display device comprising:

a vertical aligned liquid crystal display area; and

a black display control part for causing a specified area of a screen to produce a black display at a time of driving of the liquid crystal display area.

52. A liquid crystal display device according to claim 51, wherein the black display control part causes a whole area of the screen to produce a black display for one or several continuous frame periods every specified period.

53. A liquid crystal display device according to 51, wherein the black display control part sequentially selects plural screen areas divided in a vertical direction every specified period, and causes a black display to be carried out for one frame period or several continuous frame periods.

54. A liquid crystal display device according to claim 51, wherein the black display control part sequentially selects plural screen areas divided in a horizontal direction every specified period, and causes a black display to be carried out for one frame period or several continuous frame

periods.

55. A liquid crystal display device according to claim 51, wherein the black display control part gives a signal to turn off a light source provided correspondingly to the screen area on which the black display is carried out, to a power supply part of a backlight for a period when the black display is carried out.